What Is Claimed Is:

1   1.   A method for spatially compositing digital video images with a tile

2   pattern library, comprising the steps of:

3   (b)   choosing a tile pattern from the tile pattern library;

4   (c)   creating a compositing window within a display area of a

5   compositor, wherein a shape of said created compositing window matches a shape

6   of a periphery of said chosen tile pattern and wherein said created compositing

7   window is formed by pixels within the display area;

8   (d)   decomposing said created compositing window into a

9   number of tiles, wherein the number of tiles equals the amount of tiles in said

10   chosen tile pattern, wherein a shape and a position of each of the tiles matches a

11   shape and a position of a corresponding tile in said chosen tile pattern, and

12   wherein each of the tiles is formed by pixels within the display area;

13   (e)   assigning each of the tiles to a corresponding digital video

14   display unit; and

15   (f)   receiving, at each of the tiles, an image output of said

16   assigned corresponding digital video display unit, thereby spatially compositing

17   digital video images with a tile pattern library.

1   2.   The method of claim 1, further comprising beforehand the step of:

2   (a)   counting digital video display units whose image outputs

3   will be spatially composited by the compositor such that said counted digital video

4   display units determines a maximum for the amount of tiles in said chosen tile

5   pattern.

1   3.   The method of claim 2, wherein steps (a) to (f) are performed for

2   each frame in a dynamic sequence of frames of digital video images.

1   4.   The method of claim 2, wherein the parameters that define each of
2 the tiles are variable.

1   5.   The method of claim 4, wherein an area of each of the tiles is a
2 function of a complexity of the image output of said assigned corresponding
3 digital video display unit.

1   6.   The method of claim 5, wherein said chosen tile pattern takes into
2 account the complexity of the image output of each of said counted digital video
3 display units.

1   7.   The method of claim 5, wherein the function is an inverse function.

1   8.   The method of claim 2, wherein steps (a) to (f) are performed by
2 a tile compositing controller.

1   9.   The method of claim 2, further comprising after step (d), the step
2 of communicating, to the compositor, the parameters that define the compositing
3 window and the parameters that define each of the tiles.

1   10.   The method of claim 9, wherein said communicating step occurs
2 within a frame of digital video images.

1   11.   The method of claim 9, wherein said communicating step occurs
2 through a channel separate from a channel used to communicate a frame of digital
3 video images.

1   12.   The method of claim 9, wherein said communicating step
2 minimizes an amount of data needed to convey the parameters that define the
3 compositing window and the parameters that define each of the tiles.

13.   The method of claim 12, wherein said communicating step comprises obtaining, from the tile pattern library, an index code that identifies said chosen tile pattern, wherein the index code minimizes the amount of data needed to convey the parameters that define the compositing window and the parameters that define each of the tiles.

14.   A system for spatially compositing digital video images with a tile pattern library, comprising:

(a)   a tile pattern chooser to choose a tile pattern from the tile pattern library;

(b)   a compositing window creator to create a compositing window to reside within a display area of the compositor, wherein a shape of the compositing window created by said compositing window creator matches a shape of a periphery of the tile pattern chosen by said tile pattern chooser and wherein the compositing window created by said compositing window creator is formed by pixels within the display area;

(c)   a decomposer to decompose the compositing window created by said compositing window creator into a number of tiles, wherein the number of tiles equals the amount of tiles in the tile pattern chosen by said tile chooser, wherein a shape and a position of each of the tiles matches a shape and a position of a corresponding tile in said chosen tile pattern, and wherein each of the tiles is formed by pixels within the display area;

(d)   a tile assigner to assign each of the tiles to a corresponding digital video display unit; and

(e)   an image transmitter to transmit, to each of the tiles within the display area of the compositor, an image output of the corresponding digital video display unit assigned by said tile assigner, thereby spatially compositing digital video images with a tile pattern library.

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15.   The system of claim 14, further comprising a counter to count digital video display units whose image outputs will be spatially composited by the compositor such that the digital video display units counted by said counter determines a maximum for the amount of tiles in the tile pattern chosen by said tile pattern chooser.

16.   The system of claim 15, wherein said system is a tile compositing controller.

17.   The system of claim 15, further comprising a communications medium to communicate, to the compositor, the parameters that define the compositing window and the parameters that define each of the tiles.

18.   The system of claim 17, wherein said communications medium meets Digital Visual Interface specifications.

19.   The system of claim 18, wherein said communications medium is a Transitional Minimized Differential Signal data link.

20.   The system of claim 19, wherein said communications medium is within a frame of digital video images.

21.   The system of claim 18, wherein said communications medium is an Inter Integrated Circuit bus.

22.   The system of claim 17, wherein said communications medium minimizes an amount of data needed to convey the parameters that define the compositing window and the parameters that define each of the tiles.

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1   23.   The system of claim 22, wherein said communications medium
2   comprises an index code obtainer to obtain, from the tile pattern library, an index
3   code that identifies the tile pattern chosen by said tile pattern chooser, wherein the
4   index code minimizes the amount of data needed to convey the parameters that
5   define the compositing window and the parameters that define each of the tiles.